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| **Halifax County Schools Elementary School Lesson Plan** | | | | | | | | |
| Subject: MATH | **Teacher:** | | | **Grade Level: Second Grade** | | **Date(s): August 29-Sept 2, 2016** | | |
| **Content :**  Common Core Standards & Essential Standards | **2.MD.10** Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems1 using information presented in a bar graph.  **2.OA.2.** Fluently add and subtract within 20 using mental strategies. | | | | **Can Statements /Learning Targets** (I can……..)  I can draw a picture graph or bar graph to represent data.  I can solve word problems using data from a graph.  How are addition and subtraction alike? How are they different? | | | |
| Essential Question(s): (What question(s) should students be able to answer at the end of the lesson/unit?) | What data was used to create picture or bar graphs?  What strategy did you use to interpret and analyze?  What strategy did you use to find the sum or difference? Why does it work?  What strategy did you use to solve the word problems? (review)  How would you state the time to on the hour and ½ hour? (review) | | | | **Standard for Mathematical Practice:**  ***1. Makes sense and perseveres in solving problems.***  2. Reasons abstractly and quantitatively.  ***3. Constructs viable arguments and critiques the reasoning of others.***  ***4. Models with mathematics***.  ***5. Uses appropriate tools strategically.***  6. Attends to precision.  **7. Looks for and makes use of structure.**  **8. Looks for and expresses regularity in repeated reasoning.** | | | |
| **Technology Connection (Smartboard):**  <http://www.ixl.com/math/grade-2/interpret-pictograph>  <http://www.ixl.com/math/grade-2/create-pictographs>  [**http://www.softschools.com/math/data\_analysis/pictograph/games/**](http://www.softschools.com/math/data_analysis/pictograph/games/)  <http://www.ixl.com/math/grade-2/interpret-bar-graphs>  <http://www.ixl.com/math/grade-2/which-bar-graph-is-correct>  <http://www.ixl.com/math/grade-2/place-value-models-tens-and-ones> | | | |
| **Vocabulary:**  Academic/Content | bar graph, picture graph, pie charts, tally marks, data, collect, analyze, unit, more, less, least, most, interpret, create, how many more,  **Review vocabulary**: hundreds, tens, ones, place value, analog clock, sum, difference, solve, fact families, math mountains, addends, | | | | **Literature Connection:**  The Great Graph Contest by Loreen Leedy  Lemonade for Sale – Stuart Murphy  Tally O’Malley – Stuart Murphy  Less Than Zero – Stuart Murphy  The Best Vacation Ever – Stuart Murphy | | | |
| **Materials Needed:** | * Graphing Our Favorites graphing cards * Chart paper and markers * Math journals * Fruit cut-outs (Wednesday) | * Ziploc bag of pattern blocks (Thursday) and graphing mats for each * Samples of pictographs and bar graphs | | | * Graphing data bag for groups (pre-made by teacher)- contains items for pictograph or bar graph (Friday) * Graphing questions ( on chart paper or for each student) * Place Value Mats, Base 10 Blocks, Hundreds Boards * Student Time Clocks & Sets of Student Time Cards | | | |
| **Center Rotation Activities** | **Math with Teacher**  <http://www.commoncoresheets.com/Math/Bar%20Graphs/4%20Bars/2.pdf>  Teacher works with guided math group on using the data to interpret a bar graph about favorite cartoons. | **Math Fluency**  Because of math fluency in the tech center, this center will be reading about math. Choose from the list above or use books connected to the review skills for the week. | | | **Technology**  <http://www.softschools.com/math/games/mad_minute_math/>  This is an online timed game to see how many addition facts can be completed correctly in 1 minute. | | | **Writing About Math**  Students will complete 100’s Chart Activity #1 in PLC folder. |
| **Monday**  **Subject Integration:** | **Whole Group**  Have the children draw their faces ( and their name) to make a daily graphing card. At the beginning of every day, post a graphing question. Write it on a sentence strip or other paper an attach it to the top of the graphing sheet. First thing in the morning, have the children move their graphing card to place their vote. Discuss to start the graphing Tuesday through Friday.  Teacher will create a K-W-L chart recording student responses about graphs. Teacher will introduce the vocabulary that the students will encounter throughout the week. Show samples of different types of graphs. Use the newly created daily graphing cards to model a graph – What is your favorite summer activity? (Students will use this example to complete daily graphs!) Ask questions from chart.  **Independent Work** | | | | | | **Assessment (formative/summative)**  1 MD 4  2 MD 10   The daily questions about the daily graph would be asked and discussed. Sharing recordings and discussing the daily graph allows students to formulate their thoughts using appropriate vocabulary, and to clarify and extend their understanding. This enables the teacher to assess what they know and can apply, where they are in the process of learning, and what they still need.   Assessment for the daily graphing could also come from the various extensions done in class. For example, the teacher might assess a student’s journal writing on the daily graph, or assess how a child might transfer information from the class graph onto an individual graph.   Using key questions gives the teacher the opportunity to observe and evaluate the students understanding. | |
| **Tuesday**  **Subject Integration:**  **ELA-Literature**  **Every Buddy Counts – Stuart J. Murphy**  **Feast for 10 – Cathryn Falwell** | **Whole Group Mini Lesson**  ***Graphing Question for the day***: What is your favorite snack?  Discuss morning graphing chart. Have students demonstrate tally marks to count the items. Teacher will then model a horizontal and vertical bar graph using the same information. Discuss “how many more” questions.  **Whole Group**  Review knowledge of math facts to 20. Write the following numbers on the board: 5, 3, and 2. Engage students in a *think-pair-share* format. Ask them to turn and talk about how these numbers are connected. Draw an example of a Math Mountain card on the board using the prior 3 related numbers. Ask pairs of students to then talk again in a *think-pair-share-square* format to discuss and critique each others’ reasoning about how the numbers are connected. Ask student leaders to share in whole group how 5, 3, and 2 are connected. Demonstrate modeling using a math mountain and showing the relationship between addition and subtraction equations using the numbers 7, 11, and 4. You may want to label the total and the addends (partners) in the equations.    Have student volunteers give the addition and subtraction facts they can make from the  Math Mountain: 4 + 7 = 11, 7 + 4 = 11, 11-7=4, 11-4=7. Put students in groups of three  or 4. Give them a Math Mountain card and have them share with the whole group how  they came up with the addition and subtraction problems using the cards.  Write the following sentence frame on the board. Read the frame aloud with students twice.  ***If \_\_\_ plus \_\_\_\_ equals \_\_\_\_, then \_\_\_\_ minus \_\_\_\_ equals \_\_\_\_\_.***  Using the numbers 7, 11, and 4 call on a student one at a time to place a number in the correct spot on the frame and explain why s/he put the number there.  **Independent Work**  Journal Prompt: Give each student a math mountain card and have them write the addition and subtraction problems and explain their understanding. | | | | | | **Assessment (formative/summative)**  1 NBT 5  1 MD 4  2 MD 10  1 NBT 1 | |
| **Wednesday**  **Subject Integration:**  **ELA-Literature**  **Mall Mania-Stuart J. Murphy**  **Two Ways to Count to Ten – Ruby Dee**  **Mission: Addition – Loreen Leedy** | **Whole Group**  ***Graphing Question for the day***: Which fruit do you like the best?  Discuss morning graphing chart. Have fruit cut-outs in a bag. Have volunteers come to the board, choose a fruit card from the bag, and place fruit on the pictograph. Answer questions regarding graph.  **Review Lesson**  ***Draw to Solve Strategy*:** Model solving addition and subtraction problems for students. Demonstrate how to draw a picture to solve the problem. Put the students in pairs. Have other problems written on chart paper. Have pairs work through the strategy together; have volunteers show their work to the class. Prepare a problem where the sum/difference is within 20. After the students demonstrate how the draw to solve, have them complete a math mountain (yesterday’s lesson) with the numbers showing how the addition and subtraction problems are connected.    **Independent Work**  Give each student a math mountain assessment sheet (found in 2nd Grade PLC folder) to complete. | | | | | | **Assessment (formative/summative)**  1 MD 4  2 MD 10  1 OA 1 | |
| **Thursday**  **Subject Integration:**  **ELA-Literature**  **It’s About Time**  **Stuart J. Murphy**  **Clocks and More Clocks – Pat Hutchins**  **The Grouchy Ladybug – Eric Carle**  **Tuesday – David Wiesner** | **Whole Group**  ***Graphing Question for the day***: What is your favorite cookout food?  Discuss morning graphing chart. Have students demonstrate tally marks to count the items.  Give each student a bag of pattern blocks and a graphing mat. Have them place their blocks on the mat to display their graph. Have them write 3 -5 sentences about their graphs. Talk with their elbow partners about their graphs.  **Review Lesson**  Show and Tell Time Game: Read chosen book about time. Discuss the terms: analog and digital. Have cards with the digital times on them (on hour and ½ hour). Have students show corresponding time on the student analog clocks. Put student in pairs. Give them a set of time cards in baggies. Have them quiz each other. | | | | | | **Assessment (formative/summative)**  1 MD 4  2 MD 10  1 MD 3 | |
| **Friday**  **Subject Integration:** | **Whole Group**  ***Graphing Question for the day***: What is your favorite day of the week?  Discuss morning graphing chart. Have students demonstrate tally marks to count the items.  Teacher will be put students in cooperative groups. Each group will choose a graphing data bag. They will be give an large sheet of paper to create a graph using their materials. They will then answer a set a questions regarding the information in the graph.  **Review Lesson:**  Put students in 4 – 5 cooperative groups. Place an activity from the week in each group. Rotate students through review activities while assessing. | | | | | | **Assessment(formative/summative)**  1 MD 4  2 MD 10  1 NBT1  1 OA 4  1MD 3 | |
| **Reflection-Checking for Understanding**  Students in need of remediation:  Action/Activities: | | | **Reflection-Checking for Understanding**  Students on target:  Action/Activities: | | | | **Reflection-Checking for Understanding**  Students who need enrichment:  Action/Activities: | |